



*A Faster Way to
Deliver a Project*



2010 Nevada Transportation Conference

What is the I-15 North Design-Build Project?

Improvements to Interstate 15
from U.S. 95 to Craig Road



Why is this Project necessary?

*Better commute times.
Better interstate commerce.
Better mobility.
Enhanced Quality of Life.*

Why Design Build?

- Limited Right of Way requirements
- Straight forward NEPA
- Recent Legislative Authority
- We had the money, or so we thought

Why is this Project Necessary? (cont.)

- This stretch of I-15 was first constructed in the late 1960s
- 170,000 vehicles travel this congested 5.5 mile stretch daily
- Deteriorated pavements and bridges



On the Job



North Corridor Constructors, LLC, a joint-venture
between Las Vegas Paving Corporation and CH2M Hill
Original Contract Amount \$242 million



NDOT's First Design-Build Project



NTP

September 6th, 2007

1,069 Working Days
Reduced to 914

Substantially Complete
December 09

22 Months

The Process

NCC began mobilizing the project office and initiating design immediately after notice of award on July 5, 2007

- Project office available for occupancy January 14, 2008.

On the Job

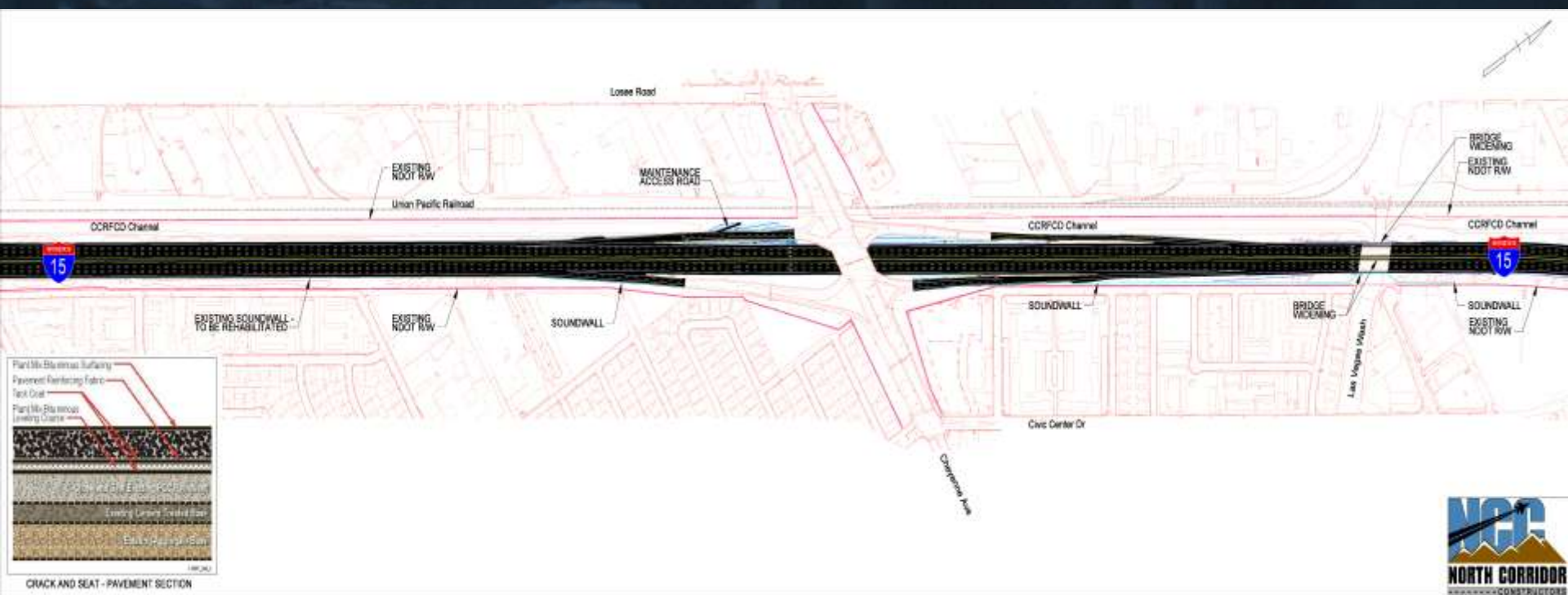


Department was supported by Parsons Brinckerhoff for the project development and contract procurement











Design



Design took 17 months to complete. NTP was in September of 2007 and design was completed by the end of January, 2009.

Elements of Construction: Pavements



- Existing concrete replaced or cracked and sealed and overlaid by ACP.
- Immediate funding considerations eliminated the plan to consider life cycle costs in pavement type selection.

Elements of Construction: Bridges

- 14 New Bridges
 - Concrete: 16,400 CY
 - Reinforcing Steel: 2.5 million lbs
 - Number of Cast in place post tensioned bridges 6 ea
 - Number of AASHTO Bulb Tee girder bridges 8 ea (the three mainline bridges built in two phases are counted as two each)
 - Number of Bulb Tee girders 104 ea (11,500 LF)
 - Number of drilled shafts 216 ea (30", 36", 60" & 78" diameter totaling 13,060 LF)



Bridge Demo



Bridge Demo

Bridge Demo Video



Innovations

Bulb tee bridges were innovative for Nevada DOT. Complex development effort with NDOT Bridge however, precast girders did prove extremely effective in meeting project schedule goals.















Elements of Construction

Misc

- Barrier Rail 17 miles of new concrete barrier rail
- Retaining Walls 180,000 sq. ft. of new precast MSE walls
45,000 sq. ft. of CIP retaining walls (comprised of 2,600 CY concrete and 240,000 lbs. of reinforcing steel)
- Sound Walls 12 post and panel walls totaling 2 miles in length, 12' avg. ht. 710 precast sound wall panels (131,373 SF)
- Storm Drain 29,126 lin. ft. of 14, 18, 24, 30, 36, 42, 48, & 60 inch RCP
- High Mast Lighting 72 poles 120' tall
- ITS throughout

Suppliers

- Concrete Suppliers

Redimix: **Silver State (Calportland)**

- Precast Suppliers

Soundwall Panels: **Olsen Precast**

MSE Wall Panes: **Reinforced Earth Company**

Bulb T Girders: **Hanson Eagle Precast**

Drainage Structures: **Olsen Precast**

RCP: **Rinker**

SCC Concrete

Originally required for all drilled shafts

Test holes drilled due to concerns regarding its use

CSL Anomalies were encountered

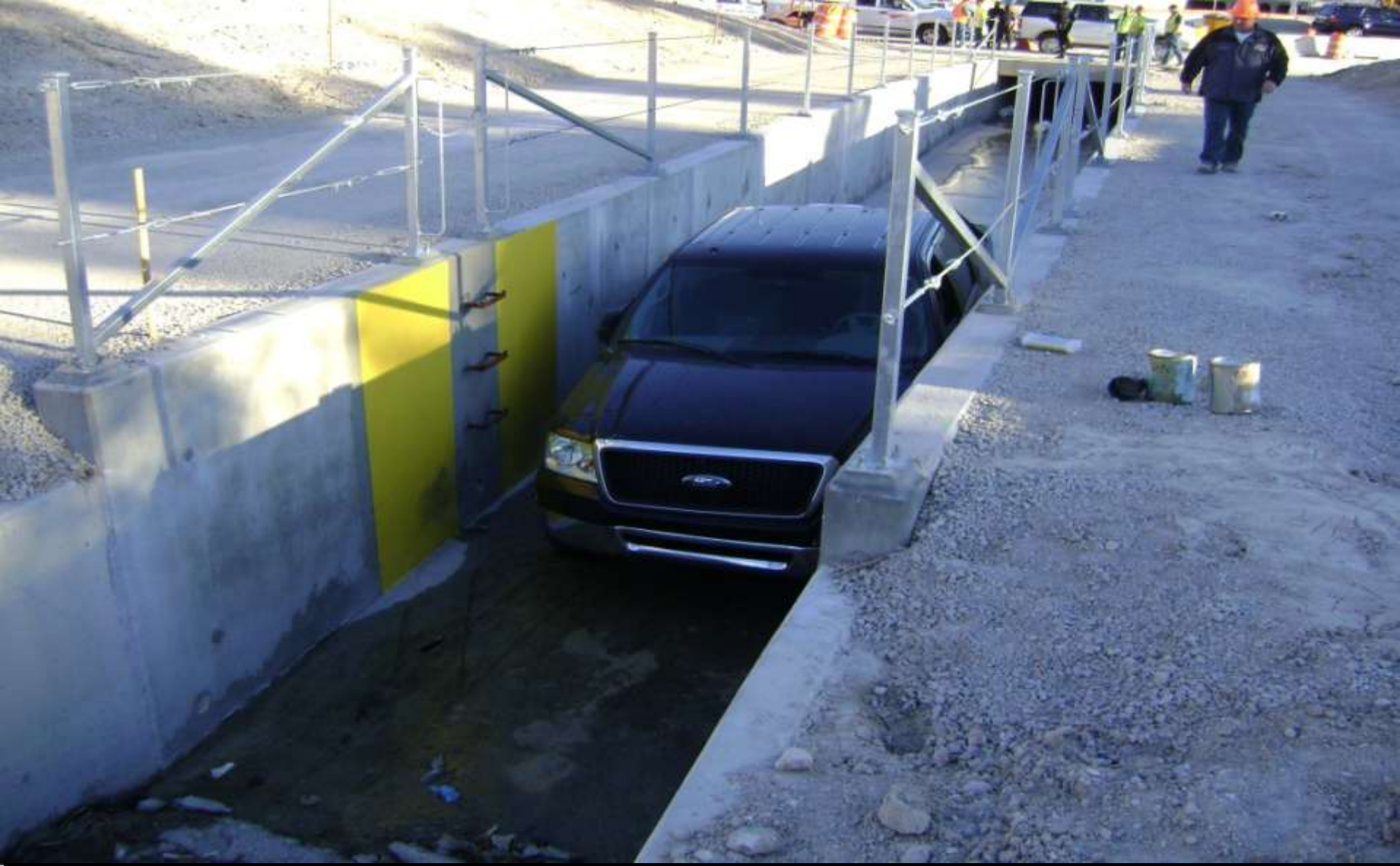
Class D Concrete replaced the SCC mixes for remaining project drilled shafts

QA/QC Program

- Immediate contractual challenges due to labor issues.
- Reconciliation of roles and responsibilities: NDOT/NCC
- Reconciliation of roles and responsibilities: NCC/Aztech
(Aztech, as the independent entity, was responsible for material sampling and testing as well as all front line inspections. NCC provided construction engineering. On the typical NDOT DBB project, NDOT construction crews perform both areas of responsibility.

Project Additions

- Local agency project additions and associated difficulties
- Different ideas of complete plans
- Traffic control plans
- Contractual requirements vs. betterments
- Out of synch with project schedule requirements/timelines/responsiveness







Dispute Resolution/Partnering

- Dispute resolution – Remained within the Project
- Communication channels continuously reinforced
- Quarterly partnering and “Special Sessions”

F Street

City project incorporated into Project

Lack of participation in public process

On-going litigation to re-open F Street









MOT

MOT overall very successful.
Discussion of Segment one lane
reductions. Continuous efforts in
MOT allowed NCC and Department to
take advantage of field conditions to
expedite work.







Segment 1 MOT Change

- Reduction in Schedule
- Incident Management Plan
- Critical assistance with signal timing provided by FAST
- Resulted in 2 phases from 3 phases

Lake Mead

Challenging
reconstruction

Nov 12 began a 6
week closure

Close coordination
between CNLV and
FCC





Lake Mead

North 5th St. Project

Losee Rd. Project

Interchange Closures



Construction Challenges

- Differing site conditions
- H Pile
- Drain Rock
- Expectations













Design Build

Communication, mutual respect, cooperation and openness to innovation are the lifeblood of Design-Build

3% Change Orders



Learn More about this Project

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Questions?